	Application No.	Applicant(s)
Notice of Allowability	09/788,459	MOLESKY, LORY DEAN
	Examiner	Art Unit	
	Anh Ly	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to <u>05/01/2006</u>.

2. ☒ The allowed claim(s) is/are <u>1-7, 9-11, 13-19, 21-29 and 31-32 (renumbered as 1-28)</u>.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some*   c)☐ None   of the:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   (a)☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

   1)☐ hereto or 2)☐ to Paper No./Mail Date _____.

   (b)☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
   Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

JEAN M. CORNELUS
PRIMARY EXAMINER

DETAILED ACTION

1.   This Office Action is response to Applicants' AMENDMENT filed on 05/03/2006.

EXAMINER'S AMENDMENT

2.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Mr. Chadwick A. Jackson (Reg. No.: 46,495) on 07/13/2006 at (202) 424-7500 and

202-373-6661.   ,

The application has been amended as follows:

Claim 1:

1. (currently amended) A computer-implemented method of automatically

labeling a graph that includes time based data comprising:

generating a plurality of time labels where each time label in the plurality of time

labels corresponds to hierarchical levels of time, by extracting and analyzing time label

information from input data comprising informational data and corresponding time data

~~labels;~~

determining ~~which of~~ whether the time labels in each of the plurality of

hierarchical levels of time fit along the time axis based on the informational data;

~~for each time label in the plurality of time labels that fits along the time axis based~~

~~on the information data,~~ if the time labels of a hierarchical level fit along the time axis,

including the time ~~label~~ labels in an initial time label set;

creating a multi-level data structure;

storing the time ~~label~~ labels in the initial time label set in the multi-level data

structure;

processing the multi-level data structure to refine the time labels;

generating multi-level time labels from the time labels that are stored in the multi-

level data structure, each multi-level time label comprising a plurality of rows of time

labels; and

applying the generated ~~label~~ multi-level time labels to the time axis of a graph so

that ~~it~~ the generated multi-level time label serves as a label for that axis.

Claim 5:

(currently amended) The method of automatically labeling a time axis of a graph

according to claim 1 whereas the step of generating time labels comprises the step of:

if the time labels of a hierarchical level does not fit along the time axis, including

the time labels in an abbreviated time label set; and

~~(a) creating an abbreviated set of time labels;~~

~~(b) determining whether the abbreviated set of time labels will fit along the time~~

~~axis and if the abbreviated set of time labels fits along the time axis proceeding to step~~

~~(g);~~

~~(c) creating an abbreviated set of time labels;~~

~~(d) determining whether the abbreviated set of time labels will fit along the time~~

~~axis and if the abbreviated set of time labels fits along the time axis proceeding to~~

~~step~~

~~(e) creating a subset of time labels;~~

~~(f) determining whether the subset of time labels will fit along the time axis and if~~

~~the subset of time labels does not fit along the time axis proceeding to step (c);~~

~~and~~

~~(g)~~ generating the abbreviated set of time labels.

Claim 6:

6. (currently amended) The method of automatically labeling a time axis of a

graph according to claim ~~5~~ 1, whereas the step of determining whether the initial set of

time labels ~~will~~ fit along the time axis comprises:

summing the length of each time label in the initial set of time labels and an inter-

label spacing constant and

comparing the sum with the length of the time axis.

Claim 7:

7. (currently amended) The method of automatically labeling a time axis of a

graph according to claim 5 ~~whereas the step of~~ <u>further comprising</u> determining whether

the abbreviated set of time labels ~~will~~ fit along the time axis comprises:

summing the length of each time label in the abbreviated set of time labels and

an inter-label spacing constant; and

comparing the sum with the length of the time axis.

Claim 8:

Cancel claim 8

Claim 11:

11. (currently amended) A <u>computer implemented</u> method of automatically labeling a time axis of a graph that includes time based data comprising:

generating a plurality of time labels, where each time label in the plurality of time labels corresponds to hierarchical levels of time, by extracting and analyzing time label information from input data comprising informational data and corresponding time data ~~labels~~;

determining ~~which of~~ <u>whether</u> the time labels in <u>each of</u> the plurality of hierarchical levels of time fit along the time axis based on the informational data;

~~for each time label in the plurality of time labels that fits along the time axis based on the information data,~~ <u>if the time labels of a hierarchical level fit along the time axis,</u> including the time ~~label~~<u>labels</u> in an initial time label set;

generating a multi-level data structure to store the time labels;

populating the multi-level data structure with the time labels;

refining the time labels in the multi-level data structure;

generating multi-level time labels from the time labels that are stored in the multi-level data structure, each multi-level time label comprising a plurality of rows of time labels;

defining axis markers that ~~will~~ be displayed on the time axis; and

applying the generated ~~label~~ <u>multi-level time labels</u> to the time axis of a graph so

that ~~it~~ <u>the generated multi-level time label</u> serves as a label for that axis.

Claim 12:

Cancel claim 12

Claim 13:

13. (currently amended) A system for performing a method automatically labeling

a time axis of a graph that includes time based data comprising:

a processor operable to execute computer program instructions; and

a memory operable to store computer program instructions executable by the

processor, for performing the steps of:

generating a plurality of time labels where each time label in the plurality of time

labels corresponds to hierarchical levels of time, by extracting and analyzing time label

information from input data comprising informational data and corresponding time data;

determining ~~which of~~ <u>whether</u> the time labels in <u>each of</u> the plurality of

hierarchical levels of time fit along the time axis based on the informational data;

~~for each time label in the plurality of time labels that fits along the time axis based~~

~~on the information data,~~ <u>if the time labels of a hierarchical level fit along the time axis,</u>

including the time ~~label~~ <u>labels</u> in an initial time label set;

creating a multi-level data structure;

storing the time ~~label~~ <u>labels</u> in the initial time label set in the multi-level data

structure;

processing the multi-level data structure to refine the time labels;

generating multi-level time labels from the time labels that are stored in the multi-

level data structure, each multi-level time label comprising a plurality of rows of time

labels; and

applying the generated ~~label~~ multi-level time labels to the time axis of a graph so

that ~~it~~ the generated multi-level time label serves as a label for that axis.

Claim 17:

17. (currently amended) A system for performing a method of automatically

labeling a time axis of a graph according to claim 13 whereas the step of generating

time labels comprises the steps of:

~~(a) creating an initial set of time labels;~~

~~(b) determining whether the initial set of time labels will fit along the time axis~~

~~and if the initial set of time labels fits along the time axis proceeding to step (g);~~

if the time labels of a hierarchical level does not fit along the time axis, including

the time labels in an abbreviated time label set; and

~~(c) creating an abbreviated set of time labels;~~

~~(d) determining whether the abbreviated set of time labels will fit along the time~~

~~axis and if the abbreviated set of time labels fits along the time axis proceeding to~~

~~step~~

~~(e) creating a subset of time labels;~~

~~(f) determining whetàer the subset of time labels will fit along the time Mis and if~~

~~the subset of time labels does not fit along the time axis proceeding to step (c);~~

~~and~~

~~(g)~~ generating the set of time labels.

Claim 18:

18. (currently amended) A system for performing a method of automatically

labeling a time axis of a graph according to claim ~~17~~ 13 whereas the step of determining

whether the initial set of time labels ~~will~~ fit along the time axis comprises:

summing the length of each time label in the initial set of time labels and an inter-

label spacing constant; and

comparing the sum with the length of the time axis.

Claim 19:

19. (currently amended) A system for performing a method of automatically

labeling a time axis of a graph according to claim 17 ~~whereas the step of~~ further

comprising a memory operable to store computer program instructions executable by

the processor, for performing the step of determining whether the abbreviated set of

time labels ~~will~~ fit along the time axis comprises:

summing the length of each time label in the abbreviated set of time labels and

an inter-label spacing constant, and

comparing the sum with the length of the time axis.

Claim 20:

Cancel claim 20

Claim 23:

23. (currently amended) A computer program product for performing a method of automatically labeling a time axis of a graph that includes time based data process in a system, comprising:

a computer readable storage medium; and

computer program instructions, recorded on the computer readable storage medium, executable by a processor, for performing the steps of:

generating a plurality of time labels, where each time label in the plurality of time labels corresponds to hierarchical levels of time, by extracting and analyzing time label information from input data comprising informational data and corresponding time data labels;

determining which of whether the time labels in each of the plurality of hierarchical levels of time fit along the time axis based on the informational data;

for each time label in the plurality of time labels that fits along the time axis based on the information data, if the time labels of a hierarchical level fit along the time axis, including the time label labels in an initial time label set;

creating a multi-level data structure;

storing the time label labels in the initial time label set information in the multi-level data structure;

processing the multi-level data structure to refine the time labels;

generating multi-level time labels from the time labels that are stored in the multi-

level data structure, each multi-level time label comprising a plurality of rows of time

labels; and

applying the generated ~~label~~ multi-level time labels to the time axis of a graph so

that ~~it~~ the generated multi-level time label serves as a label for that axis.

Claim 27:

27. (currently amended) A computer program product for performing a method of

automatically labeling a time axis of a graph according to claim 23 whereas the step of

generating time labels comprises the steps of:

if the time labels of a hierarchical level does not fit along the time axis, including

the time labels in an abbreviated time label set;

~~(a) creating an abbreviated set of time labels;~~

~~(b)determining whether the abbreviated set of time labels will tit along the time~~

~~axis and if the abbreviated set of time labels fits along the time axis proceeding to step~~

~~(g);~~

~~(e) creating a subset of time labels;~~

~~(f) determining whether the subset of time labels will fit along the time axis and if~~

~~the subset of time labels does not fit along the time axis proceeding to step (c);~~ and

~~(g)~~ generating the abbreviated set of time labels.

Claim 28:

28. (previously presented) A computer program product for performing a method

of automatically labeling a time axis of a graph according to claim ~~27~~ 23 whereas the

step of determining whether the initial set of time labels ~~will~~ fit along the time axis

comprises:

summing the length of each time label in the initial set of time labels and an inter-

label spacing constant; and

comparing the sum with the length of the time axis.

Claim 29:

29. (previously presented) A computer program product for performing a method

of automatically labeling a time axis of a graph according to claim 27 ~~whereas the step~~

~~of~~ _further comprising_ determining whether the abbreviated set of time labels ~~will~~ fit along

the time axis comprises:

summing the length of each time label in the abbreviated set of time labels and

an inter-label spacing constant; and

comparing the sum with the length of the time axis.

Claim 30:

Cancel claim 30

3.   Claims 8, 12, 20 and 30 have been cancelled.

4.   Claims 1-7, 9-11, 13-19, 21-29 and 31-32 are allowed.

Allowable Subject Matter

5.   The present application has been thoroughly reviewed. Upon searching a variety

of databases, the examiner respectfully submits that claims 1-7, 9-11, 13-19, 21-29 and

31-32 are allowed in light of the applicants' argument and in light of the prior arts of

made record.

6.   The following is an examiner's statement of reasons for allowance:

The claimed invention is directed to a method and a computer program product

stored on a computer-readable storage medium for automatically labeling a time axis of

a graph that includes time based data process in a system. The invention uses multi-

level time labels to label the time axis of a graph; generating a plurality of time labels by

extracting and analyzing time label information from input data comprising informational

data and corresponding time data.

The closest prior arts, Patent No.: US 6,091,424 issued to Madden et al.

(hereinafter Madden) teaches automatically generating time label for a given graph from

a multi-level data structure storing time labels in a table consisting a plurality of rows of

time labels; and finding a set of label for each graphical feature of graph or map. Patent

No.: US 6,320,577 issued to Alexander teaches moving time label information to the

selected axis. And Patent No.: US 6,920,608 issued to Davis teaches manipulating the

time data to label the time axis of chart, map or graph.

Thus, In combination, Madden, Alexander and Davis fail to teach "determining

whether the time labels in each of the plurality of hierarchical levels of time fit along the

time axis based on the informational data, if the time labels of a hierarchical level fit

along the time axis, including the time labels in an initial time label set, creating a multi-

level data structure and storing the time labels in the initial time label set in the multi-

level data structure."

These distinct features, in conjunction with all other limitations of the dependents

and independent claims render claims 1-7, 9-11, 13-19, 21-29 and 31-32 them
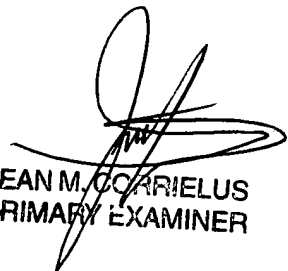
allowable.

7.   Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

Contact Information

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anh Ly whose telephone number is (571) 272-4039 or

via E-Mail: ANH.LY@USPTO.GOV **(Written Authorization being given by**

Applicant (MPEP 502.03 [R-2])) or fax to (571) 273-4039 (Examiner's

personal Fax No.). The examiner can normally be reached on TUESDAY –

THURSDAY from 8:30 AM – 3:30 PM. If attempts to reach the examiner by telephone

are unsuccessful, the examiner's supervisor, John Breene, can be reached on (571)

272-4107 or **Primary Examiner: Jean Corrielus (571) 272-4032**.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). Any response to this action should be mailed

to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, or faxed to:

Central Fax Center: (571) 273-8300

ANH LY
JUL. 18th, 2006

JEAN M. CORRIELUS
PRIMARY EXAMINER